

**Rural Recycling Business Initiative (RRBI)**  
**Arizona Department of Commerce**  
**1998 JTR Grant Final Report 99998301**  
**December 12, 2003**

***Executive Summary***

September 1, 1999 to July 1, 2003

**Project Goals**

- Attract at least 5 new recycling industries and 100 new recycling jobs to rural and tribal Arizona
- Divert 100,000 tons of waste material each year from landfills
- Attract \$25 million in rural business investment
- Establish an on-line website based on a geographical database/business directory that will allow interested parties free access to all pertinent data collected and assist in the economic development of targeted areas
- Institutionalize the website/database through strategic collaboration and resource commitment sharing with project partners

**Project Accomplishments**

- During the project period, 17 new recycling industries and 412 new recycling jobs were attracted to rural and tribal Arizona.
- These companies are diverting over 100,000 tons of materials each year from landfills.
- Attracted \$61.8 million in rural business investment.
- Developed the information required to establish a website to provide data to interested parties to assist in rural recycling business location and expansion in rural and tribal Arizona locations.
- Coordinated with project partners to locate and expand rural recycling businesses. When the website is launched, project partners including the Arizona Department of Environmental Quality and Arizona Recycling Coalition are committed to assist in the maintenance and promotion of the site.

## **U.S. EPA 1998 Grant Results and Activities**

The U.S. EPA 1998 Jobs through Recycling grant was successful in helping 17 Arizona rural recycling business establish or expand operations, although two of these companies have since closed their operations. In addition, the project resulted in the creation of 412 rural recycling jobs, \$61.8 million in rural business investment and over 100,000 tons in annual diversion from landfills.

Unfortunately, due to a combination of staff changes, new department priorities, reduced partner participation and defunct contractors, the project was never able to launch an online website. However, the information collected as a result of the project was and is currently used to assist rural recyclers as they consider projects or expansions in rural and tribal Arizona locations. This information is provided directly by the Arizona Department of Commerce through the Arizona Recycling Market Development Program. As a result of the U.S. EPA project, the following information was collected:

### **Statewide Recycling Data Collection**

The EPA grant project resulted in the development of a new system that was established to access better recycling data from annual surveys of recycling collectors, processors and end markets in Arizona. Arizona Department of Environmental Quality (ADEQ) and ADOC, working with the project partners, revised existing survey forms and developed new ones. In addition, all survey forms for the private sector were sent out under ADOC letterhead with an addressed stamped envelope for returning the surveys. ADOC was responsible for calling all end users to ensure a high return rate for their surveys. The form has been used in all subsequent years to collect recycling data annually.

As a result of input received from the 1998 surveys, three additional survey forms were developed: community recycling collection, company recycling collection and scrap metal processor surveys. The surveys go out the third week of July and follow-up phone calls are made by ADOC and ADEQ staff to ensure a high response rate. This information, including recycling company information and tonnage data will be the basis of the database.

The new reporting forms were further enhanced in 1999 to collect better quality recycling data from annual surveys of recycling collectors, processors and end markets in Arizona. New forms were created for organics recyclers, scrap metal processors and large companies, such as grocers and retailers. As in 1998, all survey forms for the private sector were sent out under ADOC letterhead with an addressed stamped envelope for returning the surveys. ADOC was responsible for calling all end users to ensure a high return rate for their surveys.

### **Community Recycling Locations on GIS**

ADEQ recycling staff began GIS mapping of community and business recycling locations throughout the state as a result of the project. Below is a completion percentage by county of their mapping efforts to date. Unfortunately due to staffing changes and a hiring freeze, GIS mapping efforts were put on hold in 2002.

Apache County	50%
Cochise County	90%
Coconino County	30%
Gila County	50%
Greenlee County	50%
Graham County	50%
LaPaz County	90%
Maricopa County	0%
Mohave County	0%
Navajo County	50%
Pima County	0%
Pinal County	10%
Santa Cruz County	50%
Yavapai County	0%
Yuma County	50%

### **Community data development**

The project allowed the collection of the following resources for rural recyclers:

Community recycling data  
Community solid waste characterization data  
Community projected solid waste generation data

Unfortunately, the contractor collecting the data went bankrupt during the project, resulting in incomplete data for the targeted communities.

## **Web Page Design and Host**

The project manager initially planned to house the web page on the Arizona Department of Commerce's website. However, due to other department priorities, it became clear that the site would not prominently display the information. After discussions with Timonie Hood, it was proposed that the interactive recycling economic development database be housed at the Arizona Recycling Coalition's web site. The AzRC board approved this project at their April 2001 board meeting. The database will be accessed through an icon on the home page of the AzRC web site. The site will also be linked to web sites of the project partners including: ADOC, ADEQ and SPRA. However, the current inactivity of the Arizona Recycling Coalition resulted in the project manager returning website host responsibilities to the Arizona Department of Commerce in 2003. When the site is up, it will be available on the Business Attraction and Development Division's page.

## **Arizona Recycling Means Business Arizona Rural Recycling Business Resource Guide**

This website is intended to be a guide for recycling-based businesses considering relocating or expanding in rural Arizona. Its main feature is an online database where local resources can be matched to business needs through data profiles of rural communities. The Guide is funded by a grant from the EPA's Jobs Through Recycling (JTR) program to the Arizona Department of Commerce.

Arizona Map with Recycling and Solid Waste Data By Community  
(Coming Soon!)

### **[Arizona Community Profiles](http://www.azcommerce.com/communities/community_profile_index.asp)**

([http://www.azcommerce.com/communities/community\\_profile\\_index.asp](http://www.azcommerce.com/communities/community_profile_index.asp))

### **[Arizona Business Assistance](http://www.azcommerce.com/BusAttraction/default.asp)**

(<http://www.azcommerce.com/BusAttraction/default.asp>)

**[Arizona Small Business Services](http://www.commerce.state.az.us/SmallBus/)** (<http://www.commerce.state.az.us/SmallBus/>)

**[Financing Recycling Businesses](http://www.epa.gov/jtr/finance/index.htm)** (<http://www.epa.gov/jtr/finance/index.htm>)

**[Arizona Rural Economic Development Contacts](#)**

**[Links](#)**

Brought to You By:



## Rural Recycling Business Initiative Project

### ***Proposed Front Page of Web Site***

Arizona Rural Community Waste and Recycling Streams  
**Link to map and list of Arizona communities**

*Text – Intro to RRBI*

Arizona Community Profiles link  
**Link to ADOC**

Arizona Business Development link  
**Link to ADOC**

Arizona Business Connection link  
**Link to ADOC**

Financing Recycling Businesses  
**Link to EPA documents**

Arizona Economic Development Contacts  
**Link to ADOC**

Arizona Recycling Market Directory  
**Will be developed later and include processors and end markets, will also include ADEQ GIS mapping info**

#### Other Links

- Arizona Department of Economic Security
- Arizona Department of Revenue
- Arizona Corporation Commission
- Arizona Small Business Development Centers

Arizona Public Service  
Tucson Electric Power  
Salt River Project

Listing of sponsors with links:

U.S. EPA – Region 9	ADOC	AzRC	ADEQ
MAG	BIA	SPRA	1-800-Cleanup

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## Arizona Rural Community Waste and Recycling Streams

*Map and listing of communities to click onto for data, including:*

Benson	Sierra Vista
Bisbee	Snowflake
Bullhead City	Springerville
Camp Verde	Taylor
Clarkdale	Thatcher
Clifton	Willcox
Coolidge	Williams
Cottonwood	Winslow
Douglas	Yuma
Eagar	
Eloy	
Flagstaff	
Fredonia	
Globe/Miami	
Holbrook	
Kingman	
Lake Havasu City	
Marana	
Morenci	
Nogales	
Page	
Parker	
Payson	
Pinetop-Lakeside	
Prescott	
Prescott Valley	
Safford	
Sedona	
Show Low	

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Information for each community:

Solid Waste Profile Overview

*Prepared by SPRA, including major industrial streams*

Community Solid Waste Recycling Infrastructure (Collection Sites)

**Source: SPRA/ADEQ/ADOC**

Solid Waste Characterization

**Source: waste characterization studies**

Community Recycling Data

**Source: Fiscal Year 2000 – from ADEQ annual survey data results July 1, 1999 to June 30, 2000**

Projected Solid Waste Generation Data by Community

**Source: modeling software**

### Marketing and Outreach Efforts

Arizona Department of Commerce, Recycling Market Development Program staff participated in the following events to promote recycling market development efforts in Arizona and highlight the state as an ideal recycling business location. This included efforts to promote rural and tribal site locations and site selection resources, as well as the EPA JTR grant.

Program staff also visited numerous local communities, both urban and rural, and tribal nations to educate and assist local economic development officials and community members in their recycling economic development efforts.

*Fiscal Year 2000*

- National Recycling Coalition – Cincinnati, OH
- Southwest Public Recycling Association – Mesa, AZ
- Governor's Rural Development Conference – Pinetop-Lakeside, AZ
- National Recycling Market Development Roundtable – New York, NY
- Arizona Recycling Coalition 1<sup>st</sup> Annual Conference & Trade Show – Phoenix, AZ
- R'2000 – Toronto, Ontario
- National Plastics Expo – Chicago, IL
- Arizona Recycles Day - statewide

### *Fiscal Year 2001*

- National Recycling Coalition – Charlotte, NC
- Governor's Rural Development Conference – Sedona
- National Recycling Market Development Roundtable – Chicago, IL
- Arizona Recycling Coalition Rural Recycling Roundtables – Sierra Vista and Yuma

### *Fiscal Year 2002*

- Governor's Rural Development Conference – Rio Rico
- Arizona Recycling Coalition Rural Recycling Roundtables – Sierra Vista
- SPRA Annual Recycling and Market Development Conference – Tucson
- National Recycling Congress – Seattle, WA
- Electric Utilities Environmental Conference – Tucson
- National Center for American Indian Enterprise Development Workshop
- International Symposium on Electronics and the Environment/Electronics Recycling Summit – San Francisco, CA
- Marketing trip (met with companies and site selection consultants) – San Francisco Area, CA

## **Conference Sponsorship and Participation**

The Arizona Department of Commerce sponsored and participated in several targeted conferences to assist in the promotion of the EPA Jobs through Recycling Grant and educate participants on the resources available to assist in rural recycling business development.

### **Southwest Public Recycling Association's 8<sup>th</sup> Annual Recycling Market Development Conference: Recycle & Compost '99**

In conjunction with ADEQ, sponsorship funding was provided for the Southwest Public Recycling Association's 8<sup>th</sup> Annual Recycling Market Development Conference. The event, held October 27-28, 1999 in Mesa, drew over 180 participants and featured educational sessions on recycling business financing options and recycling markets. The Department of Commerce also participated as an exhibitor at the conference.

### **Arizona Recycling Coalition 1<sup>st</sup> Annual Conference & Trade Show: Arizona Recycles! Get into the Loop!**

Arizona Department of Commerce staff chaired the conference planning committee and oversaw the paid conference coordinator for the Arizona Recycling Coalition's 1<sup>st</sup> Annual Conference and Trade Show. The event attracted over 200 attendees and was held May 15-16, 2000 in Phoenix. Attendees had the option of attending 27 different educational sessions in four educational tracks and three plenary sessions. In addition, the conference included equipment demonstrations and a networking breakfast and reception. Commerce also participated as an exhibitor at the conference.



### **Recycling Economic Development Training**

In conjunction with an ADEQ-funded curriculum and training program, the Department of Commerce educated local recycling officials through two Recycling Coordinators Training Programs held in November 2000 in Casa Grande and Sedona on rural recycling economic development opportunities and the recyclable material needs of recycling businesses.

### **Regional Rural Recycling Forums**

The Department of Commerce co-sponsored three Arizona Recycling Coalition regional recycling forums held October 6, 2000 in Yuma, March 16, 2001 in Kingman and October 26, 2001 in Show Low. The forums covered existing regional recycling programs, collection options, markets and infrastructure and recycling market development issues. The forums drew about 90 participants, who ranged from private recyclers to public recycling officials. During the forum, the U.S. EPA's Jobs through Recycling grant was discussed, along with rural recycling business opportunities and resources.

## **Projects Undertaken to Enhance EPA Grant**

The following projects were undertaken by the Arizona Department of Commerce to assist or complement its work on the EPA's Jobs through Recycling Grant:

### **Waste Characterization Study of the City of Nogales, Arizona**

ADEQ awarded a \$35,000 grant to the Southwest Public Recycling Association to conduct waste assessments of select rural communities in Arizona. That grant was augmented by \$14,500 to include an in-depth waste assessment of Nogales. The purpose of the study was to provide information on border community waste streams for the Rural Recycling Business Initiative. The study was funded by the U.S. EPA Jobs through Recycling grant. The study covered both residential and commercial waste and included two-day waste sorts in November 1999 and January 2000.

### **Waste stream profile of Arizona rural communities**

Funding of \$9,000 was provided to the Southwest Public Recycling Association to develop a waste stream profile, including (1) a synopsis of the community's past and current economic base, location, population and other pertinent census data; (2) breakdown of major waste stream components based on actual or similar rural Arizona waste characterization data along with identification of major segregated industrial stream, i.e., mining waste, fly/bottom ash, wood waste, etc.; (3) recycling data by community from current Arizona Department of Environmental Quality fiscal year survey results; and (4) identification of major recycling outlets and markets, if available. The project also included projections of overall waste stream using modeling software and based on economic data, projections of future community waste streams in specific categories. The data was only partially completed as the Southwest Public Recycling Association went defunct. Communities included:

Benson  
Bisbee

Bullhead City  
Camp Verde

Clarkdale  
Clifton

Coolidge  
Cottonwood

Douglas  
Eagar  
Eloy  
Flagstaff  
Fredonia  
Globe/Miami  
Holbrook  
Kingman  
Lake Havasu City  
Marana  
Morenci  
Nogales  
Page  
Parker  
Payson  
Pinetop-Lakeside  
Prescott  
Prescott Valley  
Safford  
Sedona  
Show Low  
Sierra Vista  
Snowflake  
Springerville  
Taylor  
Thatcher  
Willcox  
Williams  
Winslow  
Yuma

**Recycling-based Business Planning Workshop**

The Arizona Department of Commerce contracted with the Southwest Public Recycling Association to hold a one-day Recycling Business Planning Workshop on May 24, 2000. The Tucson workshop provided start-up and expanding recycling businesses and entrepreneurs with the information and tools needed for proper business planning. One-on-one business planning assistance was provided to participating individuals and businesses prior to and proceeding the workshop by the Arizona Council for Economic Conversion.

**Recycling Market Development Study Update**

A \$50,000 RFP was awarded to R.W. Beck to update the 1996 Recycling Market Development Study. Commerce administered the study, with funding from ADEQ. The purpose of the study was to conduct an updated economic assessment of the impact of the recycling market development infrastructure on Arizona employment, income and tax base. The economic assessment has been completed and the consultant will provide recommendations on state recycling incentives and policy. According to the study, recycling supports 839 business establishments in the state, employing 10,603 people. These direct recycling activities pour \$263 million in payroll and \$1.3 billion in sales into Arizona's economy each year.

**Assistance to Rural Eco-Industrial Park Development**

The Department of Commerce provided assistance to Bullhead City's Windy River Institute and LB International in Winslow as they developed eco-industrial park concepts.

## **Rural Business Attraction and Technical Assistance**

The Arizona Recycling Market Development Program provided a wide range of assistance to over seventy (70) companies and entrepreneurs during the grant period. Assistance included: site location assistance, identification of financing options, permitting assistance, recyclable supply stream analysis, networking, market research, and cost of doing business in Arizona and incentives information. Seventeen of these companies announced the relocation or expansion of their business into Arizona or expansion of existing Arizona operations. They will create **412** new jobs in the state within three years and make capital investments exceeding **\$61.8** million. In addition, these businesses will divert over **100,000** tons of secondary material from Arizona's landfills annually. Recyclables handled by these companies include fiber (paper), tires, organic material, mine tailings, plastics, glass, construction and demolition debris and wood. The companies include:

*Abitibi Consolidated* – As Arizona's largest end user of recyclable fiber in the production of newsprint and largest rural recycling company, Abitibi-Consolidated acquired a Chandler-based material recovery facility, Valley Recycling, to provide a reliable supply of raw material. The company also rolled-out an extensive drop-off program in locations throughout the state.

*Community Recycling Services* – This company was a new multi-material processor in northern Arizona. The company's owner owned recycling and trash disposal companies in Phoenix before retiring to Payson. Six months after opening, Community Recycling Services shut its doors after it was unsuccessful in developing commercial and residential recycling programs in Payson.

*E-Crete LLC* – This start-up company produces autoclaved aerated concrete for use in residential, commercial, industrial, institutional and public works construction near Casa Grande. Processed mine tailings comprise approximately 64% of the finished product.

*Environmental Forest Solutions* – Using the waste wood from companies involved in producing product from small diameter timber, this Eager company operates a 3 megawatt co-generation biomass electric plant. The operation produces enough electricity for 3,000 homes.

*Envirotech Recycling* - This rural Maricopa County-based company plans to cryogenically process off-road scrap tires into crumb rubber for use in various products, including floor mats.

*Eterna Building Systems* – A start-up operation, Eterna is manufacturing building blocks using post-consumer expanded polystyrene from commercial and industrial packaging. Their operation is located in Graham County, near Fort Thomas.

*Gold Circuit* - The Casa Grande operation includes a state-of-the-art technology to mechanically de-construct computer monitors and other computer components. The materials from this process (glass, plastic and metals) are completely recycled. The facility is designed to properly handle CRT's and is the largest and most advanced facility west of the Mississippi River.

*Heritage Environmental Services* – An industry leader in household hazardous waste recycling and disposal, Heritage located a household hazardous waste aggregation plant in Coolidge, at the former Proler steel recycling facility. The facility handles oil, paint, and various types of HHW. HHW is shipped to various recycling and final disposal operations throughout the country.

*Hudson Baylor (River Recycling LLC)* – This company located a material recovery facility on the Salt River Landfill, operating as an enterprise of the Salt River Pima-Maricopa Indian Community. The facility is capable of handling 350 tons of residential and commercial commingled recyclables daily from communities including Scottsdale and Mesa.

*Imperial Laminators* – This existing company developed a new technology to utilize wood waste in the manufacturer of transportation products, including guard rails.

*LB International* – A manufacturer of PureBlaze firelogs, made from recycled paper and wood, this company moved and expanded its operations in Winslow. They are in the process of developing an eco-industrial park focused on using waste wood.

*Mattera Enterprises* – A start-up company that has partnered with a long-term scrap recycler in Prescott, Mattera Enterprises provides commercial recycling services in Prescott and neighboring communities, with a focus on fiber.

*Mattera Enterprises Recycling/Discount Dumpster Services* – This is a construction and demolition (C&D) debris recycling facility, adjacent to a new C&D landfill, Iron King Waste Reduction Facility, in Humboldt. The facility sorts cardboard, plastic, mixed paper, metal and wood debris for recycling.

*OTTO Industries, Inc.* – This multi-national company is the largest manufacturer in the world of waste and recycling 2 & 4-wheeled containers. They are a supplier to Allied Waste Industries, Inc., the second largest waste management company in the U.S. Based on customer specifications, they use recycled content in the production of their containers.

*Owens Corning* – A major fiberglass manufacturer and user of glass cullet, Owens expanded their capacity and upgraded equipment to automate and improve production efficiency at their Eloy plant.

*Western Container Corporation* - Western Container Corporation is dedicated to being the premier manufacturer of PET containers for the Coca-Cola bottling system. The new facility in Tolleson produces plastic containers containing recycled content. In 2001, Coca-Cola incorporated the equivalent of 7.5% recycled content resin into its plastic beverage containers in North America.

## **Arizona Recycling Market Development Program Background**

The Arizona Department of Commerce's (ADOC) Recycling Market Development Program was created to develop local recycling markets for Arizona's recycling programs and assist in the creation of jobs and capital investment by recycling-based businesses. Specifically, the program encourages the use of recycled materials as a manufacturing feedstock by new and existing Arizona businesses, attracts recycling-based businesses to the state and assists existing Arizona recycling-based companies in their business expansions. In order to accomplish these goals, the program works closely with public, non-profit and private economic development and recycling officials.

Since 1994, the Arizona Recycling Market Development Program has assisted numerous recycling-based businesses that have located new plants or expanded existing operations in Arizona. These companies have created over 2700 jobs and their combined capital investment exceeds \$425 million.

The Arizona Recycling Market Development Program was launched in 1992 with the passage of Senate Bill 1287, which created a recycling market development program housed jointly at the Arizona Departments of Commerce (ADOC) and Environmental Quality (ADEQ). The program is funded by a portion of the 25 cent per ton landfill user fee surcharge.

In 1993, the state legislature adopted the Arizona Environmental Technology Bill (A.R.S. 41-1514.02) creating the Environmental Technology Office and providing significant tax benefits to large recycling companies that committed to an Arizona location through mid-1996. In 1994, ADOC was awarded a “Jobs Through Recycling” (JTR) grant from the U.S. Environmental Protection Agency to support the state’s recycling market development efforts.

JTR grant monies were used to fund the 1996 Arizona Recycling Market Development Study, which was jointly funded by the U.S. EPA, ADEQ and ADOC. The study was the first of its type in the nation to provide comprehensive information on the growth and development of a statewide recycling economy. The study provided baseline information designed to assist in the attraction of key recycling businesses and to help existing operations expand in Arizona. According to the study, Arizona’s recycling industry contributed over half a billion dollars to the state’s Gross State Product (GSP) in 1995. During the same year, the recycling industry also accounted for \$616 million in direct capital investment and 3,427 direct jobs.

In 1996, ADOC received a second JTR grant to promote targeted recycling business development in rural and economically depressed areas of the state. ADOC received its third JTR grant in late 1998 for the Rural Recycling Business Initiative (RRBI). This project was designed to provide the information necessary to establish recycling businesses in rural and tribal areas of the state. Specific development tools included geographic information databases, on-line and printed media that will identify and link regional waste streams, eco-industry sites, and sources and users of recyclable materials. Tools would be posted on the World Wide Web and marketed to assist local economic developers, attract new industries and help to mentor similar efforts across the country.

**Arizona Department of Commerce  
1998 U.S. EPA Jobs Through Recycling Project**

*Business Attraction & Expansion Matrix – Confidential*

Name	Community (County)	Jobs Created	Capital Investment	Annual Capacity	Annual Utilization	Materials
<b>Rural Locates</b>						
Abitibi Consolidated	Snowflake (Navajo)	15	\$3,000,000	N/A	N/A	Fiber
Community Recycling Services <sup>1</sup>	Payson (Gila)	5	\$500,000	N/A	N/A	Multi- material
Heritage Environmental Services	Coolidge (Pinal)	50	\$3,000,000	N/A	N/A	HHW
E-Crete LLC	Casa Grande (Pinal)	50	\$12,000,000	40,000 tons	5,000 tons (1 <sup>st</sup> ) 35,000 tons (3 <sup>rd</sup> )	Mine tailings
Environmental Forest	Eager	30	\$5,000,000	50,000 tons	25,000 tons	Wood



Solutions	(Apache)					
Envirotech Recycling	Mobile (Maricopa)	32	\$4,800,000	N/A	N/A	Tires
Eterna Building Systems	Pima (Graham)	8	\$1,000,000	936,000 cubic feet 3,206 tons	312,000 cubic feet	EPS
Gold Circuit	Casa Grande (Pinal)	15	\$3,000,000	20,000 tons	10,000 tons	Electronics
Hudson Baler	Salt River Maricopa Indian Community (Maricopa)	30	\$4,750,000	60,000 tons	44,000 tons	Multi- material
Imperial Laminators	Eager (Apache)	6	150,000	500,000 board feet	250,000 board feet	Wood
LB International	Winslow (Navajo)	12	\$1,200,000	15,000 tons	2,000 tons	Wood
Mattera Enterprises	Prescott (Yavapai)	12	\$500,000	N/A	5,000 tons	Multi- material
Mattera Enterprises - Discount Dumpster Services	Humboldt (Yavapai)	5	\$250,000	10,000 tons	2,000 tons	Constructio n & demo debris
Nxtcycle	Coolidge (Pinal)	7	\$150,000	5,000 tons	2,000 tons	Electronics
Owens Corning	Eloy (Pinal)	10	\$2,500,000	2,500 tons	2,500 tons	Glass
Otto Industries	Eloy (Pinal)	25	\$10,000,000	10,000 tons	5,000 tons	HDPE
Western Container Corp.	Tolleson (Maricopa)	100	\$10,000,000	2,500 tons	1,500 tons	PET

<i><b>Total To Date</b></i>		<i><b>412</b></i>	<i><b>\$61,800,000</b></i>	218 tpy	104,000 tpy	
Project Goals		<i>100</i>	<i>\$25,000,000</i>		<i>100,000 tpy</i>	